

Coastal Sage Scrub (CSS)

Side Slopes (CSS)

Wetlands



The Facts: TCA Environmental Programs

OUR COMMITMENT ...

is to balance the needs of traffic and the environment through programs that protect wildlife, preserve and restore habitat, while at the same time relieve traffic congestion. Our work is guided by this philosophy, as well as environmental laws and regulations designed to protect the environment and the public we serve.

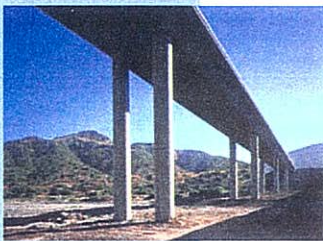


OUR TRACK RECORD

✓ To compensate for 576 acres of habitat affected by The Toll Roads, **TCA has created, restored, or preserved nearly 2,000 acres** of sensitive wetland, coastal sage scrub, and oak woodland habitats.



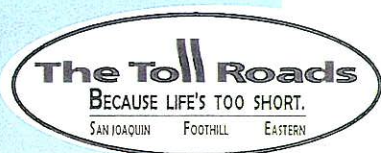
✓ TCA is a participating landowner in the Natural Communities Conservation Planning Program (NCCP), which has **set aside more than 38,000 acres of open space** known as the **Nature Reserve of Orange County**. TCA funded \$6.6 million of the \$10.6 million endowment for the nature reserve, which protects more than three dozen individual animal species.



✓ 31 pairs of federally endangered California gnatcatcher birds were affected by construction of the San Joaquin (73) and Eastern (241/261/133) Toll Roads. Today, the birds are thriving on land preserved or restored by TCA. In 2000, **37 gnatcatcher pairs gave birth to 85 babies**.

✓ In today's highly regulated environment, the TCA has received **21 permits from resource and regulatory agencies** such as the U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, California Department of Fish and Game, California Regional Water Quality Control Board, and the California Coastal Commission to build 51 miles of public toll roads in Orange County.

✓ TCA environmental programs have won awards from the American Planning Association and International Bridge Turnpike and Tunnel Association.



- ✓ A study of the effects of the 1993 Laguna Beach fire on the local population of gnatcatchers indicated that the **birds bred more successfully in areas where TCA controlled the brown-headed cowbird**, a gnatcatcher predator. TCA monitoring studies have shown that this effort, combined with the recovery of the gnatcatcher's native coastal sage scrub habitat, are believed to have boosted the area's gnatcatcher population.
- ✓ TCA has built **11 wildlife bridge crossings** under The Toll Roads to allow continued movement of wildlife. Studies using infrared cameras have documented numerous animals, such as mountain lions, deer, coyote, bobcat, and smaller mammals like raccoons, are using the crossings.
- ✓ TCA funds **research and monitoring** of its mitigation sites. The data obtained provides valuable scientific data on the development of coastal sage scrub and other sensitive plant habitats.



TCA has restored or preserved nearly 2000 acres of land

EASTERN (241/261/133) TOLL ROAD Total: 453.2

Limestone Coastal Sage Scrub (CSS).....	4.6
Limestone Woodland.....	24.4
Limestone Scrub.....	10.2
Siphon Reservoir CSS.....	214
Side Slopes CSS.....	200

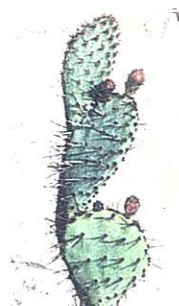
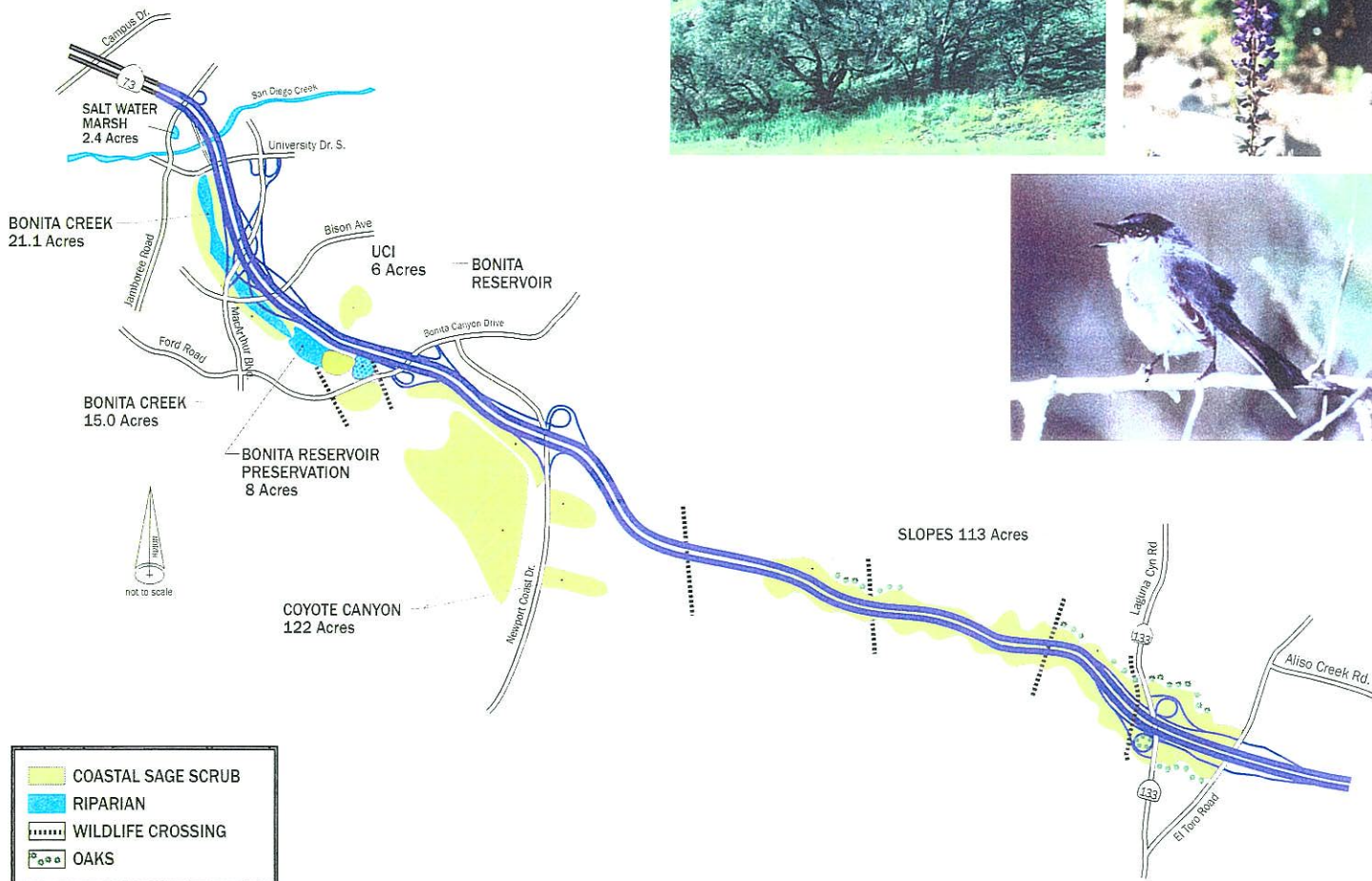
FOOTHIL (241) TOLL ROAD Total: 1,244.8

Chiquita Canyon Conservation Area.....	1,182
Canada Gobernadora Woodland.....	19.7
Canada Gobernadora Riparian.....	4.4
Oso Section Slopes CSS.....	32.8
FTC-N Slopes CSS.....	5.9

SAN JOAQUIN HILLS (73) TOLL ROAD Total: 291.6

Coyote Canyon CSS.....	122
Bonita Wetlands.....	21
Bonita Reservoir CSS.....	8
Bonita Channel Slopes CSS.....	15
Side Slopes CSS.....	113
UCI Ecological Reserve CSS.....	6
Saltwater Marsh.....	2.4
Canada Gobernadora Riparian.....	4.2

THE SAN JOAQUIN HILLS (73) TOLL ROAD ENVIRONMENTAL MITIGATION



THE SAN JOAQUIN HILLS (73) TOLL ROAD

ENVIRONMENTAL MITIGATION

The mitigation programs designed and implemented by the Transportation Corridor Agencies (TCA) for each of the toll roads currently open to traffic reflect a serious commitment to environmental protection. Each mitigation program represents state of the art technology in habitat revegetation, scientific studies, habitat conservation and management, and endangered species protection. Our mitigation programs have received national awards from the Federal Highway Administration and have been rated "A" by the U.S. Fish and Wildlife Service. We have also received awards for our environmental programs from the American Planning Association and International Bridge Turnpike and Tunnel Association. Highlights of the mitigation program for the San Joaquin Hills Toll Road are provided below.

- Coyote Canyon/Bonita Creek Wildlife Habitat Corridor, a 168 acre site featuring coastal sage scrub (CSS), riparian woodland and saltwater marsh. This site won the 1997 Federal Highway Administration Environmental Excellence Award.
- Coyote Canyon, a closed landfill restored using state of the art revegetation techniques now supports nine breeding pairs of California gnatcatchers, a federally listed species. In 2001, 10 pairs of gnatcatchers produced 53 chicks.
- Bonita Creek, a 21-acre wetland site is successfully serving as a link between the Upper Newport Bay and the San Joaquin Hills. Coyote and mountain lion have been recorded using the site.
- San Diego Creek, a 2.4-acre saltwater marsh is used regularly by the endangered California least tern, in addition to many other bird species, as foraging habitat.
- A seven year study of the recovery of the California Gnatcatcher after the 1993 Laguna Beach fire has indicated that the gnatcatcher population appear to be recovering to pre-fire levels.
- Continued cowbird trapping the San Joaquin Hills have reduced the incidences of nest parasitism to almost zero.

In addition to the mitigation described above, the TCA is a proud participant and major contributor to the Central/Coastal Natural Community Conservation Plan (NCCP). This plan set aside 38,738 acres of prime habitat in Orange County for 42 individual species. In addition to contributing our mitigation sites to the program, the TCA also funded \$6 million of the \$10 million endowment. This fund provides for the management of the Nature Reserve of Orange County in perpetuity.

THE FOOTHILL (241) & EASTERN (241, 261 & 133) TOLL ROADS ENVIRONMENTAL MITIGATION



THE FOOTHILL (241) & EASTERN (241, 261 & 133) TOLL ROADS

ENVIRONMENTAL MITIGATION

The mitigation programs designed and implemented by the Transportation Corridor Agencies (TCA) for each of the toll roads currently open to traffic reflect a serious commitment to environmental protection. Each mitigation program represents state of the art technology in habitat revegetation, scientific studies, habitat conservation and management, and endangered species protection. Our mitigation programs have received awards from the Federal Highway Administration. We have also received awards for our environmental programs from the American Planning Association and International Bridge Turnpike and Tunnel Association. Highlights of the mitigation program for the Foothill/Eastern Toll Road are provided below.

- The Eastern Toll Road mitigation program features the 50-acre Limestone Canyon wetland/riparian woodland site. State of the art streambed stabilization techniques were used at this site to contain a meandering channel at Limestone Canyon.
- Specialized soil treatments were tested on a 2 acre demonstration plot prior to implementation of the 214 acre Siphon Reservoir coastal sage scrub site. Today, 15 breeding pairs of California gnatcatchers, a federally listed species, occupy the site. The Siphon Reservoir CSS project produced 50 chicks in the 2001 breeding season.
- An annual cowbird-trapping program in the areas surrounding El Toro Marine Base, Villa Park Dam and Siphon Reservoir contributes to the recovery of the California gnatcatcher and least Bell's vireo.
- The Foothill Toll Road Upper Chiquita Canyon Conservation Area features the protection of 1,182 acres of coastal sage scrub, oak woodland and riparian habitat through the dedication of a perpetual conservation easement. The TCA is actively managing this easement to increase habitat values.
- The 28-acre Canada Gobernadora Riparian Mitigation Site won an environmental award from the International Bridge Turnpike and Tunnel Association.
- TCA constructed 8 wildlife crossings under the Foothill/Eastern Toll Road to allow continued movement of wildlife. The TCA conducts annual monitoring of the crossings.

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UPPER CHIQUITA CANYON CONSERVATION AREA

LOCATION

1,182 acres running east and west of the 241 Toll Road at Oso Parkway near Coto de Caza and Rancho Santa Margarita.

BACKGROUND

TCA entered into an agreement with the Rancho Mission Viejo Company in 1996 to conserve and actively manage the Upper Chiquita Canyon Area as part of mitigation for construction of the Foothill (241) Toll Road. The Rancho Mission Viejo Company, which continues to hold the title to the land, previously used the site for agriculture and cattle.



COMMITMENT TO NATURE

TCA is seriously committed to environmental protection. Each mitigation program represents state of the art technology in habitat revegetation, scientific studies, habitat conservation and management, and endangered species protection. TCA is a proud participant and major contributor to the Central/Coastal Natural Communities Conservation Plan (NCCP). This plan set aside 38,783 acres of prime habitat in Orange County for 42 individual species. In addition to contributing our mitigation sites to the program, the TCA also funded \$6 million of the \$10 million endowment fund. This fund will provide for the management of the Orange County Nature Reserve in perpetuity.

ACTIVE MANAGEMENT

TCA actively manages the conservation area according to the Resource Management Plan, developed and approved by the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game, and the Foothill/Eastern TCA. Biologists and environmental consultants periodically weed the site of non-native plants, perform wildlife surveys, and plant test areas of coastal sage scrub in order to understand how native plants might thrive on the site long-term.

MONITORING

In May 2002, a wildfire burned most of the conservation site but the site is returning to its pre-fire condition. Native plants including Mexican elderberry, deer weed, and prickly pear cactus have started to grow back and recent surveys show birds are continuing to populate the site. Portions of the site that were not burned will serve as a source for birds, such as the California gnatcatcher and cactus wren, to colonize other areas as the habitat naturally recovers. TCA biologists continue to monitor and document the site's recovery.

PRESERVATION IN PERPETUITY

Once established, the Upper Chiquita Canyon Conservation Area will become part of the Southern Natural Community Conservation Plan (SNCCP) which will protect thousands of acres of open space in south Orange County. Currently, the SNCCP is in the environmental planning process and should be implemented in the next three to four years.



MAJOR HABITATS OF UPPER CHIQUITA CANYON CONSERVATION AREA

COASTAL SAGE SCRUB

Coastal sage scrub (CSS) occurs on the ridges and slopes and comprises a community of low growing, soft woody drought-deciduous sub-shrubs and herbaceous plants that typically grow on thin, rocky soils in Southern California. CSS occupies approximately 630 acres of the conservation area, and it is generally dominated by coastal sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*). Within the conservation area are areas where shrubs are establishing on the edges of the annual grasslands. These areas are ecotones and occur in the valleys along the eastern ridges as well as in narrow bands along the lower edge of CSS in many areas.



COASTAL SAGEBRUSH
(*ARTEMISIA CALIFORNICA*)



PURPLE NEEDLEGRASS
(*NASSELLA PULCHRA*)

NATIVE GRASSLAND

Two types of perennial native grasslands are located in the conservation area and both are considered rare by the State of California. Both types of grassland occur in clay loam to clay soils. One type at the northeastern area of the site is categorized as coyote brush/purple needlegrass series. This grassland is dominated by purple needlegrass (*Nassella pulchra*) with coyote brush (*Baccharis pilularis*) also present, along with non-native grasses. The second type of grassland is the purple needlegrass grassland series. Italian ryegrass (*Lolium multiflorum*) is also a common species in this series. These grasslands occur on heavy clay soils on slopes and contain a number of forb species including Pacific sanicle (*Sanicula crassicaulis*), blue dicks (*Dichelostemma pulchellum*) and golden stars (*Bloomeria crocea*) as well as other annual exotic grasses and bromes.

ANNUAL GRASSLAND

There are approximately 548 acres of annual non-native grassland species of Mediterranean origin, including oats (*Avena fatua* and *A. barbata*), brome grasses (*Bromus diandrus*, *B. hordeaceus* and *Bromus madritensis* ssp. *rubens*), fescue (*Vulpia* spp), and ryegrass (*Lolium* spp.) within the conservation area. Other species present in the community include native and non-native forbs and herbs including summer mustard (*Hirschfeldia incana*), western ragweed (*Ambrosia psilostachya*), telegraph weed (*Heterotheca grandiflora*), wild radish (*Raphanus sativus*), burclover (*Medicago polymorpha*), and filaree (*Erodium* spp.).



BROMES GRASSES
(*BROMUS CARINATUS*)



ELDERBERRY
(*SAMBUCUS MEXICANUS*)

OAK WOODLAND

There are approximately 15 acres of oak woodlands within the conservation area. Oak woodlands are limited in distribution and occur on primarily north-facing slopes. The community is dominated by coast live oak with associated species including elderberry (*Sambucus mexicana*) and poison oak. Coastal sage scrub intergrades with the oak woodland community and often composes a percentage of the shrub understory. An herbaceous understory consists of annual grassland species, melic grass (*Melica imperfecta*), and common chickweed (*Stellaria media*). Some locations of oaks could be classified as oak savannah, because the tree canopies are distinct and do not form a contiguous overhead canopy.